

**What is claimed is:**

1. A color filter assembly rotating around a central axis thereof, including:

a carrier having a plurality of holes and rotating  
5 around the central axis;

a color filter fixed to the carrier;

a plurality of balancing elements individually and  
movably located in the holes such that the center  
of mass of the color filter assembly is on the  
10 central axis.

2. The color filter assembly as claimed in claim 1,  
wherein the holes are formed parallel to the color filter  
and longitudinally toward the central axis.

3. The color filter assembly as claimed in claim 1,  
15 wherein the holes are symmetric to the central axis.

4. The color filter assembly as claimed in claim 1,  
wherein the holes are threaded for the balancing elements  
moving therein.

5. The color filter assembly as claimed in claim 1,  
20 wherein the balancing elements are adhered to the carrier  
when the center of mass of the filter assembly is on the  
central axis.

6. A color wheel, including:

a filter assembly of claim 1;

25 a motor;

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a shaft at the central axis connecting the motor and  
the filter assembly, wherein the motor rotates  
the filter assembly via the shaft;

7. The color filter assembly as claimed in claim 6,  
5 wherein the holes are formed parallel to the color filter  
and longitudinally toward the central axis.

8. The color filter assembly as claimed in claim 6,  
wherein the holes are symmetric to the central axis.

9. The color filter assembly as claimed in claim 6,  
10 wherein the holes are threaded for the balancing elements  
moving therein.

10. The color filter assembly as claimed in claim 6,  
wherein the balancing elements are adhered to the carrier  
when the center of mass of the filter assembly is on the  
15 central axis.